What are the recovery and attrition outcomes for group CBT and individual CBT for Generalised Anxiety Disorder in an IAPT Service? An exploratory study.

Abstract

Background

Group Cognitive Behavioural Therapy (gCBT) is commonly used in Increasing Access to Psychological Therapies (IAPT) services. However, there is limited knowledge of the efficacy of gCBT as a delivery format for Generalised Anxiety Disorder (GAD).

Aims

To address gaps in literature, this study aims to explore the efficacy and attrition of individual and group CBT interventions, respectively, at Step 3 for GAD using data from a routine IAPT service over a 24-month period.

Method

Data were retrospectively derived from a routine service's IAPTus database, separating those eligible for comparison into group (n=44) and individual (n=55) CBT for GAD. Outcomes were differences in pre-post self-reported anxiety (GAD-7), depression (PHQ-9) scores, clinical recovery and attrition for gCBT and individual CBT.

Results

Both gCBT and individual CBT yielded significant reductions in self-reported anxiety and depression scores over time. Results indicate that 53% of patients attending individual CBT achieved clinical recovery, with similar but less competitive rates of 41% in gCBT. Attrition rates were similar between gCBT (29.5%) and individual CBT, (27.3%), respectively.

Conclusions

Preliminary results suggest that both individual and gCBT are effective interventions for GAD patients in IAPT, offering symptom alleviation and comparable recovery and attrition rates post-intervention. This observational design offers credibility and insight into a pragmatic evaluative and explorative comparison. GCBT may offer an acceptable and potentially economical alternative.

Keywords: GAD; group cognitive behavioural therapy; IAPT, CBT

Key Learning Aims

1. To explore whether gCBT and individual CBT yield significant symptom reduction in self-reported anxiety and depression in GAD patients from a routine IAPT service.
2. To explore gCBT and individual CBT clinical recovery rates in non-optimum routine conditions.
3. To explore whether gCBT for GAD produces unacceptable attrition rates and if this differs to attrition rates in individual CBT for GAD in a routine IAPT service.

Introduction

Generalized Anxiety Disorder (GAD) is a highly prevalent common mental health disorder, second only to depression; it is estimated up to one in twenty individuals will experience GAD in their lifetime (Ruscio et al., 2017). GAD is characterised by pathological worry, rumination and cognitive distress that penetrates across several domains of an individual's life, along with physical complaints such as increased blood pressure and tension (International Classification of Diseases-10, World Health Organisation, 2010). The economic burden of anxiety disorders is large, being the sixth leading cause of disability globally (Baxter, Vos, Scott, Ferrari & Whiteford, 2014). GAD makes a substantial contribution to this burden, with rates of up to 15-20%

in primary care alone (Holaway, Rodebaugh & Heimberg, 2006; Shepardson, Buchholz, Weisberg & Funderburk, 2018). The prevalence of common mental health problems is gradually rising, with longer term trends showing steady increases (9.3%) from 2007 to 2014 (McManus, Bebbington, Jenkins & Brugha, 2016). In response to inclines in the prevalence of common mental health problems, and associated costs, the Improving Access to Psychological Therapies (IAPT) initiative (Clark, 2011) aims to deliver evidence-based interventions recommended by the National Institute for Health and Clinical Excellence (NICE) within an economical and pragmatic framework. NICE recommend group and individual Cognitive Behavioural Therapy (CBT) for GAD, however there is a paucity of research to support the utility of group-delivered CBT (gCBT) in comparison to individual CBT (NICE, 2011).

The lack of data to either support or refute the efficacy of group-based treatments for GAD is likely to influence the choice of treatments in IAPT services and public perceptions of the legitimacy of group treatment (McCrone, Dhanasiri, Patel, Knapp & Lawton-Smith, 2008; Sharp, Power & Swanson, 2004). Group CBT may offer several advantages over individual CBT, both conceptually and practically. Therapeutic factors specific to gCBT may aid patients in recovery, such as normalisation and vicarious reinforcement in a safe, collaborative environment (Whitfield, 2010). This is supported by reports of peer support, acceptance and connectiveness in group settings (Huntley et al., 2002). There are also public mental health benefits from accessing individuals who feel too stigmatised to enter traditional one-to-one therapy (Whitfield, 2010), thereby supporting those who would otherwise not pursue psychological support. This is in line with IAPT's ethos of increasing access (Clark, 2011).

Practically, gCBT has been suggested to be more cost-effective than individual CBT, when equal efficacy is assumed (Liber et al., 2008). Generally, literature suggests that gCBT may be more cost-effective than individual CBT for depression (Tucker & Oei, 2007) and produces superior cost-effectiveness ratios for panic disorder and agoraphobia (Roberge, Marchand, Reinharz & Savard, 2008). Whilst Scott and Stradling suggest that gCBT modalities can result in 50% cost savings, it should be noted that research on the fiscal advantages of gCBT are not yet fully supported, due to the complexity of such calculations (Tucker & Oei, 2007). Along wait-list times of appropriate referrals needed for gCBT (Liber et al., 2008), therapist adherence and manualisation is likely to influence cost effectiveness, with greater adherence being associated with greater symptom relief (Bright, Neimeyer & Baker, 1999; Oei & Boschen, 2009). Nevertheless, preliminary support suggests that gCBT may offer a more cost-effective alternative to individual CBT, particularly in settings which lend themselves to standardisation and have access to large numbers of referrals, such as IAPT services (Oei & Dingle, 2008). Therefore, group treatments may offer advantages over individual CBT in IAPT in terms of increased cost-effectiveness (Tucker & Oei, 2007) and participation (Oei & Dingle, 2008).

The need to increase availability of CBT and demands for a cost-effective treatment further provides a strong rationale for gCBT, which may explain why more IAPT services are deploying group treatments for anxiety (Wykes, 2013). However, the lack of evidence and the gap between research trials and implementation between clinical practice is large (Scott, 2018); thus gaps need to be addressed to facilitate adaptations from research to routine practice (Shafran et al., 2009). Whilst randomised control trials (RCTs) are viewed as the gold standard of intervention research, they prioritise internal over ecological validity, causing difficulties with generalisation to

clinical settings (Kodal et al., 2018). On the other hand, support from clinically representative settings aid the establishment of a treatment's efficacy (Gunter & Whittal, 2010). As such, there is a need for explorative research for gCBT in clinical settings to facilitate the transferability of research into practice to understand its efficacy (Chorpita, 2003).

The effectiveness of gCBT has been studied in other disorders, with research generally finding equal efficacy with individual CBT. For example, a meta-analysis of studies on depression, bipolar, panic and social anxiety disorders, found rates of recovery, improvement, and deterioration did not vary between individual and group formats (Burlingame et al., 2016b). Indeed, systematic evaluations of non-randomised effectiveness studies of group-based psychological therapies for depression suggest that gCBT can produce long-term gains (Hans & Hiller, 2013), finding no significant differences between individual CBT and gCBT in symptom reduction (Huntley, Araya & Sailsbury, 2012). Scrutiny of GAD outcome studies have suggested that gCBT is third less efficacious than individually-delivered CBT (Fisher & Durham, 1999), with a more recent meta-analysis of GAD reporting greater improvements in worry outcomes in individual CBT, as opposed to gCBT, at post-treatment (Covin, Ouimet, Seeds and Dozois, 2008). However, discrepancies in the age of participants between individual and group may have confounded reliable interpretation of outcomes, particularly given the likely increased distress and resistance to change that may be associated with longer chronicity in GAD. The lack of relevant studies of gCBT may create scepticism about its use as a first line of treatment (Schwartze et al., 2017). This is important considering that literature on GAD is underdeveloped in the anxiety field in general (Cuijpers, Cristea, Karyotaki, Reijnders & Hubiers, 2016).

Research aimed at understanding gCBT across anxiety disorders rarely use comparison group for context; a further recent meta-analysis of gCBT in mental health community samples found large effects in reducing symptoms of panic, depression and GAD, but utilised no comparator (Heatherington et al., 2014). Although the broader literature suggests that gCBT is likely to be effective, it cannot be determined whether it is as efficacious as individual CBT. This is highly relevant due to the growing pressure on NHS services to meet the needs of individuals with mental health problems, when group formats are considered more economically viable. When equal efficacy has been established, authors attribute null differences to the small number of studies included and the large number of predictors used (Cuijpers et al., 2016). As such, studies examining efficacy may be undermined perhaps due to the lack of formats bearing direct comparison. This gives rise to a need for research that examines gCBT outcomes in the context of individual CBT, that is relevant and informative to clinical settings.

The few GAD studies that have conducted comparative research within the same study have largely come from paediatric populations (e.g. Flannery & Kendall, 2000). Recently, McKinnon et al., (2018) concluded gCBT was equally effective as individual CBT in reducing clinical severity in pre-adolescent children with GAD. This is supported by Manassis et al. (2002), who in an RCT of group and individual CBT for childhood anxiety, found no main effects of treatment format in functioning or anxiety reduction. However, the average age of onset for GAD is commonly estimated to be between 31 and 34.9 years (de Lijster et al., 2017; Kessler et al., 2005), which is significantly later than other anxiety disorders. As such, there is a need for replication of findings within adult populations, who represent a significant proportion of those with GAD (de Lijster et al., 2017).

Withstanding the dearth of studies examining outcomes for group and individual CBT for GAD in adult populations, Dugas et al. (2003) in a controlled replication study with adults (Ladouceur et al., 2000), found gCBT produced greater improvement on all measures in adults, compared to waitlist controls; and showed a similar efficacy of gCBT to individually delivered CBT for GAD in the Ladouceur et al., (2000) study. Though between-studies comparisons should be interpreted with caution, it is one of the only controlled studies with adults that demonstrates group efficacy in GAD patients using the same protocol and patient factors. Indeed, in a recent review of 25 years of group therapy literature, Schwartze et al. (2017) argues the evidence base is too small to draw meaningful conclusions in support of gCBT, Burlingame and Jensen (2017) comment that convincing evidence specific to GAD is lacking, as group data on GAD is missing from literature (Burlingame & Jensen, 2017). This warrants need for further exploration into the effectiveness of gCBT for GAD.

As well as improving functioning, an effective treatment should be acceptable and provide quality of improvement (Barkham et al., 2006). Non-completers show a worse prognosis than completers (Manassis et al., 2002; Swift & Greenburg 2014) and missed /incomplete treatment sessions cost in terms of finance, targets and time in IAPT (Radhakrishnan et al., 2013). Non-completers commonly terminate therapy prior to session five and may return for further treatment, utilising more resources than completers (Heatherington et al., 2014; Perreault et al., 2014). Retention is therefore important for both service users and service providers. There is some evidence suggesting gCBT elicits higher attrition than individual CBT (Heimberg, Salzman, Holt and Blendell, 1993; Fernandez et al., 2015). However, the evidence is overall mixed and differences in attrition may be due to other variables that differed between studies,

rather than variations in the treatment approach (Swift & Greenburg, 2014). It is evident that further research into the efficacy of gCBT for GAD is warranted.

Group interventions may provide a more cost-effective alternative treatment format (Oei & Dingle, 2008) and represent a significant 'step' in the current stepped care model of psychological therapies services in the UK NHS. Given the high level of utility of group formats in the provision of Improving Access to Psychological Therapies services, a pragmatic explorative study of the efficacy and acceptability of GAD treatments would produce ecologically valid findings that inform our understanding of comparative formats. RCTs are often criticised for optimised conditions and lack of ecological validity – here we attempt to address this by scrutinising these outcomes from a pragmatic setting and comparing this to research using gold standard well controlled approaches such as the RCT .

Aims

This study sought to offer an exploration of non-randomised comparison outcomes for gCBT and individual CBT at High Intensity, within a stepped-care model of a routine IAPT service for GAD. Symptom reduction, clinical recovery, and acceptability of treatment format are explored.

Method

Design

A retrospective design was used to compare the efficacy of symptom reduction over time in gCBT and Individual CBT. Initial assessment (T1) and last treatment session (T2) were used to measure clinical change, with anxiety and depression symptoms as the primary dependent variables and clinical recovery and attrition as

secondary outcome variables.

Sample

Overall, participants (n=99) were predominantly white (78%), followed by black (7%) and other ethnicities (14%). The average age was 34.5 years (SD=10.6) and most participants were female (64.5%). Most participants were either employed full or part time (74%), were unemployed (11%) or classified as 'other' (14%). Patients had a primary diagnosis of GAD, assessed using the ICD-10 criteria (Department of Health 2007), were at least aged 18, resided in the same borough as the IAPT service and attended at least one treatment session of gCBT or individual CBT. See Table 1 for demographic information by group.

Allocation

Participants self-referred or accessed the IAPT Service through a general or health practitioner. They then completed an initial assessment (a semi-structured interview using the PHQ-9 and the GAD-7) either on the phone, or face-to-face if telephone triage was not possible. A diagnosis of GAD was made by the assessing practitioner and their supervising psychologist. If there was disagreement, cases were taken to supervision. If patients met diagnostic criteria, they were offered to either attend group or individual CBT for GAD. Individuals were placed on a waiting list for gCBT or individual CBT for GAD at High Intensity (HI). See CONSORT Diagram (Figure 1).

CBT Intervention for GAD

Participants received up to 12 weekly, 90-minute sessions for those in the group intervention, or 12 weekly, one-hour sessions for those in individual intervention condition. Both interventions utilised the same treatment protocol (Dugas, Gagnon,

Ladouceur & Freeston, 1998) as recommended by NICE and the Department of Health (Roth & Pilling, 2007). The first few sessions consisted of psychoeducation about how the perception and interpretation of uncertainty is important in maintaining worry and anxiety. Subsequent sessions aimed to improve identification and acceptance of uncertain situations, supplemented by breathing and relaxation techniques, thought records and thought challenging homework. In the current study, six groups ran over two years and the average gCBT group contained seven patients (mode=9).

Procedure

A search on the IAPT service's online clinical database (IAPTus) was conducted to extract patient records of those received treatment for GAD between April 2015 and April 2017. Participants were screened to ensure (a) GAD was the primary diagnosis (b) they were treated using the NICE endorsed treatment approach (Dugas' model of uncertainty, 1998), (c) they had not received both gCBT and individual CBT in one treatment episode and (d) they received only CBT during sessions within one episode of care (i.e. not CBT plus interpersonal therapy within one episode). Case records were individually inspected to assure inclusion criteria was met. Participants were sub-divided into two groups: individual CBT (n=55) and gCBT (n=44) for GAD (see Figure 1). Only those receiving High Intensity (HI) CBT were included in the analysis, as GAD Groups were not offered at Low Intensity (LI) in the service from which this data was drawn. Patients treated with individual therapies based on models differing to Dugas' model of uncertainty were not included in the analysis, to allow for comparison to the gCBT group which exclusively uses Dugas' model.

Demographic data, outcome data at T1 and T2, number of treatment sessions and treatment episodes they received were also extracted.

Figure 1. CONSORT Diagram of group allocation.

Measures

Change in clinical severity and recovery, was established using cut offs on the Generalised Anxiety Disorder-7 ([GAD-7] Spitzer, Kroenke, Williams & Löwe, 2006) and the Patient Health Questionnaire-9 ([PHQ-9] Kroenke, Spitzer & Williams, 2001).

The GAD-7 (Spitzer et al., 2006) is a seven item self-report questionnaire for screening and measuring symptoms of GAD, such as frequency of pathological worry and feelings of catastrophe (Spitzer et al., 2006). The GAD-7 uses a four-point scale (0 not at all to 3, nearly every day) and scores are added together to give a total that describes the severity of the anxiety over the last two weeks. A cut-off score of eight is recommended to identify the likely presence of a diagnosable anxiety disorder (Kroenke et al., 2007), as commonly used in IAPT services (National Collaborating Centre for Mental Health, 2018). The GAD-7 has demonstrated good reliability and construct validity across primary care clinics (Spitzer et al., 2006).

The PHQ-9 (Kroenke et al., 2001) screens for symptoms and severity of depression in a nine item self-report questionnaire. The PHQ-9 uses a four-point scale (0, not at all to 3, nearly every day) and scores are added together to give a total that describes the severity of the depression over the last two weeks. A cut off core of 10 indicates the presence of clinical depression (Manea, Gillbody & McMillan, 2012; National Collaborating Centre for Mental Health, 2018). The PHQ-9 has been shown to be a reliable measure of depression in primary care clinics (Kroenke et al., 2001).

Clinical Recovery

Patients were classed as recovered if they obtained scores both below case-level depression (PHQ-9 score ≥10) and anxiety symptoms (GAD-7 score ≥ 8) at last point of contact (post-treatment). Definitions of clinical recovery differ in scientific literature and between designs (e.g. Sharp et al., 2004 and Richards & Borglin, 2011).Though these criteria do not use the definition of reliable and clinically significant change (Jacobson & Truax, 1991), these are the standard criteria for recovery currently applied in IAPT services (Clark, 2011). As such, the criteria reflect consequential recovery rates that are acknowledged by services in practice. Patients scored above clinical thresholds at T1.

Attrition

Attrition was established through defining dropouts as those who failed to complete at least 5 (of 12) treatment sessions (Heatherington et al., 2014). Therefore, cases were classified as either dropouts (attending fewer than 5 treatment sessions) or completers (attending 5 or above treatment sessions).

Data Analysis

Data was analysed using IBM SPSS Statistics-23. Data were anonymised at point of collection to ensure confidentiality and anonymity. The last available PHQ-9 and GAD-7 scores of participants before discharge as a proxy for outcomes (in line with intention-to-treat principles). To investigate statistically significant differences in anxiety and depression over time, paired t-tests were conducted on PHQ-9 and GAD-7 scores at Time 1 and Time 2, respectively. This was done for both individual and group CBT groups. Clinical recovery and attrition in individual and gCBT for GAD were explored as percentages, presented later in the results, along with other clinically

relevant outcomes.

Further statistical exploration of demographic data (gender, ethnicity and employment case-level depression) of individual CBT and gCBT groups were conducted through chi-squared tests. Other relevant clinical characteristics of gCBT and individual CBT groups were explored through chi-squared tests (instances of case-level depression, recovery rates, attrition rates) and paired t-tests (number of treatment sessions attended and number of clinical episodes).

Results

Group Characteristics

Table 1 reports baseline characteristics for both conditions reflected a high degree of similarity across the two conditions. There was a non-significant difference in employment of those in gCBT and individual CBT, with those in gCBT appearing better engaged in employment. A statistically greater number of females attended gCBT and there was generally more ethnic diversity in individual CBT, though this did not reach statistical significance.

Table 1. Sample Characteristics, Reported by Group.

Anxiety and depression reduction in Group and Individual CBT

PHQ9 scores in gCBT were found to significantly reduce between Time 1 and Time 2 ($t(44)= 4.28$, $p<.001$. $d= 0.65$). GAD-7 scores also significantly reduced over time in the gCBT group ($t(44)=5.99$, $p<.001$, $d=.90$), as shown in Table 2. Similarly, individual CBT yielded significant reductions in PHQ-9 scores ($t(54)=4.96$, $p<.001$, $d=0.67$) and GAD-7 scores ($t(54)=6.95$, $p<.001$, $d=0.94$).

Table 2. Symptom Reduction over time in gCBT and individual CBT.

Figure 2. Reduction in GAD-7 scores over time for individual CBT (n=55) and gCBT (n=44) groups (left).

Figure 3. Reduction in PHQ-9 Scores over time for individual CBT (n=55) and gCBT (n=44) groups (right).

Clinical Recovery in Group and Individual CBT

Clinical recovery rates in gCBT and individual are detailed below (Table 3). Over half of those in individual CBT reached below clinical thresholds (53%), whilst 41% of those in gCBT were deemed as recovered at last point of contact. Though more of those in individual CBT achieved recovery, gains made were not significantly different to that of gCBT (χ^2 (1)=1.37, p=.24). It is interesting to note that descriptively those in individual CBT experienced greater case-levels of depression than those in gCBT, suggesting a greater degree of functional impairment in individual CBT groups. However, this difference did not reach statistical significance.

Table 3. Clinical Recovery (%) in gCBT and individual CBT.

Attrition in Group and Individual CBT

Attrition rates of gCBT and individual CBT are presented below (Table 4). Descriptively, both interventions yielded similar attrition. Under a third of those in individual CBT (27.3%) and in gCBT (29.5%) terminated their therapy before session five. Those in in individual CBT attended an average of 9.9 treatment sessions

(SD=4.3) and similarly, those in gCBT attended 8.7 sessions. Table 4 also shows the mean number clinical episodes that patients in individual CBT and gCBT experienced. Statistically, however, differences in attrition (χ^2 (1)=.062, *p*=.83), treatment sessions attended (t(97)=1.54, *p*=.13) and clinical episodes (χ^2 (5)=4.37, *p*=.50) were not significant.

Table 4. Attrition (%) number of Treatment Sessions Attended and number of Clinical Treatment episodes experienced (*m*, SD) in gCBT and individual CBT.

Discussion

The study sought to explore the efficacy of gCBT relative to individual CBT for GAD in a routine setting, using a pragmatic naturalistic rather than a controlled comparison. Positive significant outcomes are reported overall for both groups in terms of reductions in anxiety and depression at post-treatment, with medium to large effect sizes. Around half of those in individual CBT recovered (53%), with those in gCBT reporting acceptable outcomes also (41%). Both interventions appeared well-adhered to, with under at third of patients prematurely terminating therapy in both gCBT and individual CBT groups (χ^2 (1)=.062, p=.83).

Both gCBT and individual CBT interventions were well attended, with patients attending 8.7 of 12 treatment sessions in gCBT and 9.9 of 12 treatment sessions in individual CBT. Those in gCBT and individual CBT experienced a mean of 1.39 and 1.33 treatment episodes, respectively. As re-referrals and missed treatment sessions are costly in terms of therapeutic time and allocation of resources (Cairns, 2014), this study provides insight into important questions over the longevity and acceptability of gCBT, in the context of outcomes of individual CBT from a routine IAPT service.

Clinical recovery in IAPT is defined as a shift to below the clinical threshold at post-treatment (Richards & Borglin, 2011) with IAPT aiming for a recovery rate of 50% for those who complete treatment (Dormon, 2015; NHS Digital, 2017). According to results of the current study, individual CBT achieved this rate (53%), whilst gCBT reached below this target (41%). Findings are consistent with outcomes from an observational prospective cohort study of 32 IAPT services in their first year, which found on average that 40% of patients recovered overall (Gyani et al., 2013), again replicating previous findings with an alternative design. However, more recent reports suggest that 52.5% of eligible referrals moved to recovery in 2018 (NHS Digital, 2018). GAD patients tend to have a worse prognosis than those with other anxiety disorders, which blanket targets do not account for (Waczak et al., 2017). This is noteworthy and should be considered in the context of these findings. As such, the current study provides a bridge from research to understanding recovery in clinical practice.

Results support the existing limited literature on format efficacy, provided by RCTs (Burlingame et al., 2016a; Manassis et al., 2002; Sharp et al., 2004). Results replicate findings of the RCT in Manassis et al., (2002) whereby significant post-intervention reductions in anxiety and improvements of global functioning were cited in pre-adolescent children with GAD and social anxiety, regardless of treatment format. Results further support findings that gCBT is as effective as individual CBT at reducing measures of anxiety and depression in adults with other disorders, such as social anxiety (Sharp et al., 2004). The current study also compliments finding from a 25-year meta-analysis of controlled studies that have directly compared individual CBT to gCBT across a range of disorders, finding no differences between formats for rates of treatment acceptance, recovery, attrition and improvement (Burlingame & Jensen, 2017).

However, literature to date has been inconsistent over the efficacy and acceptability of gCBT, with the quality of evidence cited in meta-analyses and the relevance of results obtained from RCTs being bought into question (Schwartze et al., 2017). This pragmatic exploration of gCBT outcomes aids our understanding of attrition and recovery in ecologically relevant settings, whilst extending and replicating findings from well-controlled comparative formats from other populations. As research on the utilisation of gCBT for GAD is underdeveloped in comparison to individually delivered CBT (Burlingame & Jensen, 2017), current findings support the deployment of gCBT for GAD in IAPT services (NICE, 2011). Further research should continue to explore and more robustly compare these formats in pragmatic naturalistic settings where barriers to treatment and treatment delivery form part of an implementation analysis.

Due to the pragmatic nature of the study the clinical relevance is high, however we cannot readily generalize due to the exploratory nature of this study. The conditions, participants and therapists within the service were not subject to controls, in line with the observational nature of the study. This increases the ecological relevance of the study, offering new and novel insights and evidence to support current research in the field. Though the strength of RCTs is their high treatment fidelity with minimal bias, most RCTs are narrow in their research focus and restrictive in their participant selection, with most patients being secondary-care patients, who differ to patients seen in primary care on many levels (Hotopf, 2002). The design features of RCTs also mean that procedures of the study are typically removed from routine clinical practice (Hotopf, 2002). As a result of the high level of control that RCTs are able to employ, with optimal conditions of patient selection and timings of interventions made possible, RCTs can be criticised for being limited in their generalisability to settings where

conditions naturally differ to that trial (Treweek & Zwarenstein, 2009). Therefore, this study meets the call for routine-based efficacy studies in the field on gCBT (van Ingen & Novicki, 2009) which are needed in order for IAPT services to benefit from the increased access to psychological interventions that gCBT facilitates (Scott, 2018). This study expands the evidence-base for group therapy which may help to address any misconceptions professionals and patients have about its efficacy (Piper, 2008) and supports findings from other research designs in the field, such as RCTs. By using different research designs and settings to replicate findings, we gain more confidence in our conclusions.

Results from our exploration of treatment formats for GAD did not support the notion that gCBT yields higher rates of attrition (Fernandez et al., 2015), as suggested by previous research replicating a CBT intervention for GAD, where dropout rates were significantly higher in group than individual format (Ladouceur et al., 2000). Our findings are supported by a recent large meta-analysis, which concluded no differences in attrition between individual and gCBT (Burlingame et al., 2016a). RCTs yield significantly lower attrition rates than that of clinical practice (Richards & Borglin, 2011; Swift & Greenburg, 2012). For example, Ladouceur et al. (2000) reported 0% attrition in the individual CBT group, yet on average, a quarter of patients in IAPT dropout after just one session (Ali et al., 2017). This illustrates that non-completers are likely to be more common in clinical practice than in RCTs, possibly due to increased pressures and demands on both the trial and participants; optimal participant selection is not possible in clinical settings. Findings indicate that gCBT does not yield significantly higher attrition, with a third of patients who dropped out in both treatment groups.

Considering the results of the current study, the potential of treating larger numbers of patients simultaneously has positive implications in providing cost-efficient therapies in primary care services and beyond. As gCBT is easily standardised and manualised, a large number of patients can be treated by fewer staff members in lesser time, saving therapeutic resources (Oei & Dingle, 2008). Although the current study was unable to measure cost-effectiveness, NICE (2011) comment for high intensity populations, gCBT is likely to be more cost-effective than individual CBT. In a climate of long waiting lists and limited resources, the universal benefits of gCBT can provide a treatment that is not only cost-effective, but clinically sound (Manassis et al., 2002; Olatunji, Cisler & Deacon, 2010). In order for wide-scale dissemination to occur, demonstration of cost-effectiveness is needed, as such assumptions are not yet grounded in robust literature (Gunter & Whittal, 2010). Whilst treatment provision is only one aspect of calculating cost-effectiveness at a health-service level or wider (Chilsolm et al., 2016), with the assumption of five patients per group, gCBT can produce the same improvement with 60% of the time consumed in individual treatment (Burlingame et al., 2016b). Taken together, group treatment requires fewer therapeutic resources and can treat more patients from the same resource, suggesting gCBT has the potential to be a more cost-effective format than individual CBT. This can produce long-term savings, with the assumption of equal efficacy. Comparative research is encouraged with an economic analysis of the treatment, in order to inform policy with certainty.

Strengths and limitations

The results of the study should be interpreted in light of its strengths and limitations. The use of naturalistic data in the current study has the advantages of ecological validity and clinical relevance for practitioners. Unlike controlled trials, where duration of treatment is fixed per protocol, in the current study there the wide

variation of treatment session attendance reflects routine in clinical practice, as patients attended to attain a good-enough level of improvement (Barkham et al., 2006). In addition, there were few exclusions to receiving intervention in the current study, whereas clinical trials more frequently screen out on the basis of comorbidity. It is purported that routine practitioner therapists digress from CBT protocols, to instead rely more on experience than experimental research due to the large gap in conditions between RCTs and daily practice (Becker, Zayfert & Anderson, 2004). Considering some disorders, like GAD, are underrepresented in the anxiety field (Burlingame & Jensen, 2017) this is unsurprising. Chorpita (2003) suggest that in order to increase the utility of the research evidence base, RCTs should be used in combination with transportability studies that are representative of clinical settings. As individual CBT is more widely understood and accepted, this study increases the relative paucity of evidence relating to gCBT. Further effectiveness data should be conducted to continue to address this gap.

A further strength of the study is the use of an intention-to-treat analysis, a more conservative measurement appropriate to routine practice setting where non-completers are more common (Heritier et al., 2003). As the majority of patients who do not attend the last scheduled session show a poorer trajectory, missing data could lead to the assumption that patients improve more than they actually did (Clark, 2011). In addition, weekly measurement of symptoms meant that data was available even in cases of premature termination (Gyani et al., 2013). As data completeness is less common in clinical settings than in RCTs, this approach can be used for other naturalistic studies (Shafran et al., 2009).

Noted limitations of the current study is the exploratory nature and the lack of scientific justification for direct comparison between the groups due to the extraneous

variables ubiquitous in the clinical setting that hamper interpretation of findings. However, this study is the first of its kind, and provides further evidence of the comparative efficacy of gCBT using a research design without the gold standard RCT. We suggest this is a meaningful contribution from a pragmatic setting, despite lack of absolute confidence in generalizability. This study is also limited by potential selection bias as due to absence of well controlled conditions or randomly allocation to condition. However, in practice patients are selected for treatments based on their presenting symptoms, as it is unethical to not best improve chances of recovery (Manassis et al., 2002). This is demonstrated herewith, as those in individual CBT were more severely impaired than those in gCBT, which it highlights the potential of individual factors to determine allocation to therapy. In this sense, RCTs offer a more sensitive way of determining added effects of treatments to recovery, but such selection is not representative of clinical practice (Clark et al., 2009).

The small sample size is a limitation of the current study and a greater powered study on a larger scale is recommended to replication findings. To place this sample into context, indicators from the Annual Report on the use of IAPT Services England 2018-2019 suggest that 40,059 referrals are made for CBT at HI for GAD. Around 23% of all referrals for all mental health concerns received HI therapy alone and 39% of referrals received both HI and LI therapies (NHS Digital, 2019). However, small sample sizes are a common methodological problem when analysing interventions. Small samples also appear to be common in other primary care studies, however these may be better controlled (Barrowclough et al., 2006; Holmes, Donovan, Farrell & March, 2014; Manassis et al., 2002; Sharp et al., 2004). Given the explorative nature of the study, a direct comparative investigation is required to statistically compare the relative efficacy of gCBT and individual CBT.

A further limitation is the long-term effects of the two modalities are unknown. Considering patients as 'recovered' at the last therapy session can be criticised for being overoptimistic (Bockting, Hollon, Jarrett, Kuyken & Dobson, 2015). In contrast, mental health policies for primary care emphasise recovery at the point of discharge (Department of Health, 2014), which may reinforce short-term perceptions about disorders. Tyrer and Baldwin (2006) suggest GAD treatments rarely result in complete resolution of symptoms in the long-term, with only a third maintaining gains (Whitfield, 2010). Results therefore need to be considered in light of knowledge of natural recovery and outcomes of RCTs (Richard & Borglin, 2011). However, findings from gCBT delivered for depression in a routine setting suggest that post-treatment gains remained stable at 3-month follow ups, with large effect sizes (Thimm & Antonsen, 2014). Future studies should offer post-treatment follow-up appointments, to measure the comparative long-term impact of gCBT (Ali et al., 2017). Though IAPT do offer six month follow-ups, these are not mandatory and have to be initiated by the treating therapist (Dormon, 2015), even if patients did consent to further contact. This can explain the lack of follow-up data available, limiting the ability to inform policy about best practice and delivery of psychological services.

Conclusions

This study aimed to explore the effectiveness and acceptability of individual CBT and group CBT, for the treatment of GAD in a routine IAPT service offering an explorative comparative description. Both treatment conditions produced statistically significant reductions in depression and anxiety, with descriptively comparable rates of clinical recovery and attrition. Given the efficacy, applicability and efficiency of gCBT, this study supports the use of group CBT for GAD, and their alignment with IAPT's targets of improving access and recovery. Future research should seek to replicate these

findings on a larger scale and consider both pragmatic and more robust well-controlled statistical designs, with longer follow-up in a routine care setting.

Key Practice Points

1. gCBT and individual CBT can produce reductions in self-reported anxiety and depression over time in a routine IAPT service.
2. 53% of patients attending individual CBT reached clinical recovery, with comparative rates of 41% in gCBT.
3. gCBT may provide a potentially cost-effective alternative to individual CBT, given descriptively similar attrition and recovery rates.
4. CBT therapists may consider the unique positives of gCBT beyond the benefits of treating more patients out of the same therapeutic resource.

Further Reading

Burlingame, G. M., & Jensen, J. L. (2017). Small group process and outcome research highlights: a 25-year perspective. *International Journal of Group Psychotherapy, 67*(sup1), 194-218. https://doi.org/10.1080/00207284.2016.1218287

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